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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/808,731

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John A. Cadwalader

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EXAMINER

ARTMAN, THOMAS R

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/808,731

Applicant(s)

CADWALADER ET AL.

Examiner

Thomas R. Artman

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 and 37-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 13-23, 27 and 37-47 is/are rejected.
- 7) ☒ Claim(s) 2-12 and 24-26 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

Claims 1, 3-6, 17-22, 41 and 43-46 are objected to because of the following: each claim recites, at least once, a limitation that begins with “configured to”, which causes confusion since the above claims do not define how the apparatus is configured for the intended purpose. In order to improve the clarity of the claims, perhaps the term “configured” should be deleted throughout. A good example is in claim 42, where the limitation is a clearly expressed structural requirement that must be met by the prior art.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 14-23, 27 and 37-40 are rejected under 35 U.S.C. 102(e) as being anticipated by Thompson (US 6,808,308 B2).

Regarding claims 1, 19 and 37, Thompson discloses a system and method for the attenuation of radiation (Figs. 1-4), including:

a) a shield 14 made of an irradiation attenuating material (lead) and is disposed at least partially in front of an opening defined by a gantry (Fig.2) to reduce radiation exposure during a CT procedure (col.2, lines 26-34), and

b) an interface (U-shaped portion 20, 26 and 28) that detachably couples the shield to the CT machine, where

c) the shield is selectively added and removed from the CT machine depending upon the procedure (col.2, lines 34-49).

With respect to claim 14, Thompson further shows that the shield has a substantially rectangular shape (item 38).

With respect to claims 15 and 16, Thompson further shows that the shield has a substantially circular shape (Figs.1-4).

With respect to claim 17, the shield is configured to reduce radiation exposure to medical personnel operating the machine.

With respect to claim 18, the shield is configured to reduce radiation exposure to the patient (from surroundings).

With respect to claim 20, Thompson further discloses that the shield coupled at a lateral side of the patient table and extends downward therefrom (Figs.2 and 9).

With respect to claim 21, Thompson further discloses that the shield extends continuously between the CT machine and the patient table (Figs.1-4 and 9).

With respect to claim 22, Thompson further discloses that the shield is directly coupled to the CT machine and the patient table (Fig.9).

With respect to claim 23, Thompson further discloses that the shield is a one-piece member and has a substantially rectangular shape (Fig.3).

With respect to claim 27, Thompson further shows that the shield is configured to be moved from one lateral side of the patient table to the other (Figs.1-4 and 9).

With respect to claim 38, Thompson further shows that the shield is disposed across the opening defined by the gantry (Figs.2-4 and 9).

With respect to claim 39, Thompson further discloses that the shield is coupled to a front portion of the CT machine (Figs.2-4 and 9).

With respect to claim 40, Thompson further discloses that the shield is coupled to the patient table (Figs.2-4 and 9).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13 and 41-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Thompson, as applied to claim 1 above, in view of McCord (US 6,740,260 B2).

Regarding claim 41, Thompson discloses a system for the attenuation of radiation (Figs.1-4), including:

a) a means for reducing radiation exposure 14 to medical personnel during the CT procedure, where

b) the means is coupled to the CT machine and positioned between the CT machine and the medical personnel.

With respect to claim 13 and further regarding claim 41, Thompson does not specifically disclose that the shield is substantially non-lead. The shield is made of lead.

McCord teaches the practice of using non-lead shielding for greater flexibility of desired material properties and ease of manufacture while being safer for manufacturing, handling, repair and disposal since lead is not used (col.1, lines 35-54; col.3, lines 29-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the shield of Thompson to use non-lead materials for the purposes of tailoring the material to the shielding use as well as for improved safety and manufacturing ease as taught by McCord.

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With respect to claim 42, Thompson further shows that the means is detachably coupled to the CT machine (Fig.9).

With respect to claim 43, Thompson further discloses that the means is selectively added and removed from the CT machine depending upon the procedure (col.2, lines 34-49).

With respect to claim 44, Thompson further shows that the means is a one-piece member that is partially disposed in front of the opening defined by the gantry of the CT machine (Figs.1-4 and 9).

With respect to claim 45, Thompson further shows that the means is a one-piece member that is detachably coupled to the front portion of the CT machine (Figs.2, 4 and 9).

With respect to claim 46, Thompson further shows that the one-piece member is detachably coupled at a lateral side of the patient table (Figs.4 and 9).

With respect to claim 47, Thompson further shows that the one-piece member extends continuously between the CT machine and the lateral side of the patient table (Figs.1-4 and 9).

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Claims 41 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boyd (US 4,977,585) in view of McCord.

Regarding claim 41, Boyd discloses a system and method of attenuating radiation (Figs.2-4), including a means for reducing radiation exposure 21 to medical personnel during a CT procedure, where

b) the means is coupled to the CT machine and positioned between the CT machine and the medical personnel.

Boyd does not specifically disclose that the shield is substantially non-lead. The shield is made of lead.

McCord teaches the practice of using non-lead shielding for greater flexibility of desired material properties and ease of manufacture while being safer for manufacturing, handling, repair and disposal since lead is not used (col.1, lines 35-54; col.3, lines 29-52).

It would have been obvious to one of ordinary skill in the art at the time the invention was made for the shield of Thompson to use non-lead materials for the purposes of tailoring the material to the shielding use as well as for improved safety and manufacturing ease as taught by McCord.

With respect to claim 42, Boyd further discloses that the shield is detachably coupled to the CT machine (can be reversibly installed and removed by way of screws and other mounting hardware).

Allowable Subject Matter

Claims 2-12 and 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record neither teaches nor reasonably suggests the additional limitation that the radiation attenuation material is flexible, as required by the combination as claimed in each of claims 2 and 24. The shield of Thompson is rigid and has to be rigid in order to maintain its vertical shape.

Claims 3-6, 10-12 and 25 are allowable by virtue of their dependency.

The prior art of record neither teaches nor reasonably suggests the additional limitation that the interface comprises hook and loop fasteners, as required by the combination as claimed in each of claims 7 and 26. The shield of Thompson is not physically attached to the gantry; instead, it uses hook and loop fasteners in order to attach to the patient table (col.4, lines 29-39; col.4, line 64 through col.5, line 3). Furthermore, the prior art device was fixed to the gantry and not removable based upon the procedure type (col.5, Table 1).

Claims 8 and 9 are allowable by virtue of their dependency.

Conclusion

Applicant's arguments with respect to claims 1, 19, 37 and 41 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. McCord (US 2005/0258404 A1), Kantor (US 6,945,694 B2) and Batten (US 6,967,343 B2) teach alternatives to lead-based shielding materials. Jaeger (US 5,900,638) teaches reconfigurable shielding, but it is not detachable based upon the procedure, nor it is used with a CT gantry device.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas R. Artman whose telephone number is (571) 272-2485.

The examiner can normally be reached on 9am - 5:30pm Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on (571) 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Thomas R. Artman
Patent Examiner



EDWARD J. GLICK
SUPERVISORY PATENT EXAMINER